

A New Species of Marine Amphipod (Gammaridea: Ampeliscidae) from the Sublittoral of Southern California

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Abstract.—A new species of ampeliscid amphipod, *Ampelisca brachycladus*, is described from southern California. The species is distinctive in having the inner ramus of uropod 1 approximately one-half the length of the outer ramus. *Ampelisca brachycladus* occurs along the southern California bight in shallow water (10–50 m) on a variety of substrates.

The genus *Ampelisca* Krøyer 1842 is at present represented by 34 species on the continental shelf of the northeastern Pacific and 214 worldwide. This genus is exclusively marine and estuarine (Enequist 1949) and found on sublittoral sand and mud bottoms. Approximately 80% are sublittoral and 20% are bathyal to abyssal (Barnard 1969). The genus *Ampelisca* has been examined in many major studies along the eastern Pacific coast (Holmes 1908; Barnard 1954, 1960, 1967, 1971; and Dickinson 1982) and will not be reviewed in this paper.

Only those diagnostic characters in combination that distinguish the new species from all known species of *Ampelisca* are illustrated. All illustrations and descriptions are based on type material.

Ampelisca brachycladus n. sp.

Figures 1–3

Description.—Female holotype, 7.3 mm. Head (Fig. 1) as long as first three pereonites combined; lower front margin of head oblique; oblique margin slightly concave; frontal margin of head not incised. Two corneal lenses on each side; lower cuticular lens positioned at lateral angle of head. Antenna 1 short, slender, not reaching end of peduncle of antenna 2; peduncular article 1 one-half length of article 2; article 3 short, flagellum subequal to peduncle. Antenna 2 of moderate length; article 3 short; article 4 longer than article 5; flagellum bearing sparse medium setae. Upper lip with median apical notch. Mandibular palp (Fig. 2A) 3-articulate; first article borne on medial elevated process bearing patch of minute setules, and armed with 2 lateral setae. (Note: stippled area on medial surface of first article of Fig. 2A indicating cuticular fold not intersegmental arthrodivial membrane.) Left lacinia with 4–5 cusps; spine row with 8 large spines; molar toothed and ridged. Lower lip with mandibular lobe weak or lacking; inner lobe well developed. Maxilla 1 (Fig. 2B) outer lobe with 10 denticulated spines; palp with 4 strong apical spines. Maxilla 2 (Fig. 2C) inner plate setose. Maxillipedal palp (Fig. 2D) 4-articulate; outer lobe with 10 spines (medial group of spines spatulate and terminal ones long and slender); inner lobe setose and with a single apical spatulate spine. Pereonal segments dorsally smooth. Coxae 1–4 longer than broad;

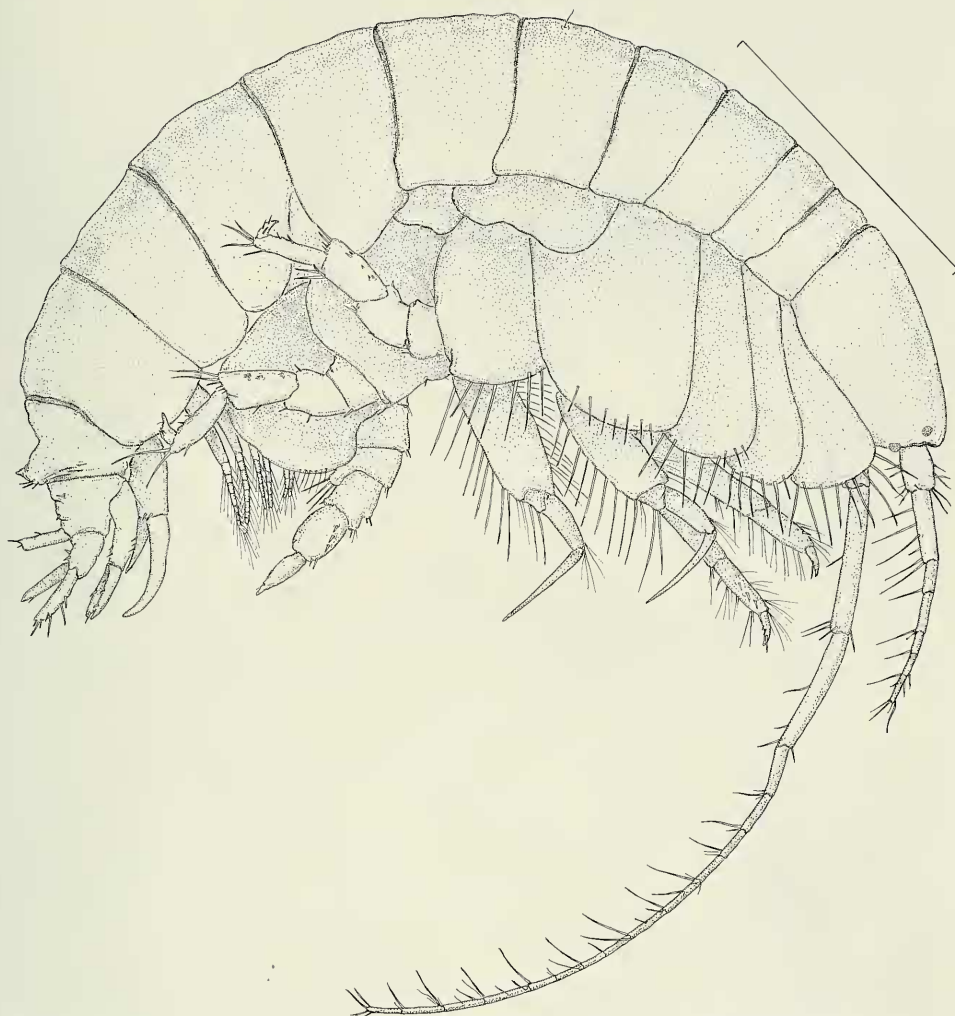


Fig. 1. *Ampelisca brachycladus* n. sp., female paratype, Santa Monica Bay, California. Scale: 1.0 mm.

lower posterior corners untoothed. Coxa 1 expanded distally. Coxae 1–2 with a single row of plumose setae along entire ventral margin. Coxa 3 with sparse plumose setae on posterior ventral margin. Coxa 4 with sparse short setae along ventral margin; upper one-third strongly excavate posteriorly.

Gnathopods 1 and 2 simple; both pereopods with pectinate setae. Gnathopod 1 moderately setose along posterior margin of articles 5 and 6, and setose on distal half of anterior margin of articles 5 and 6. Gnathopod 2 articles 5 and 6 moderately setose along posterior margin. Pereopods 3 and 4 similar to each other; pereopod 3 article 4 with setae only on anterior distal margin; pereopod 4 article 4 with setae along the entire anterior margin. Pereopods 5 and 6 similar (see Fig. 3A); article 6 with two spines on posterior margin, with setal tuft on distal end; article 5 with three sets of spines on posterior edge, with setal tuft at distal end; dactyl short, hooklike, and reversed. Pereopod 7 (Fig. 3B) lower lobe of article 2 reaching joint between articles 4 and 5; lower posterior edge of lobe oblique; article 4

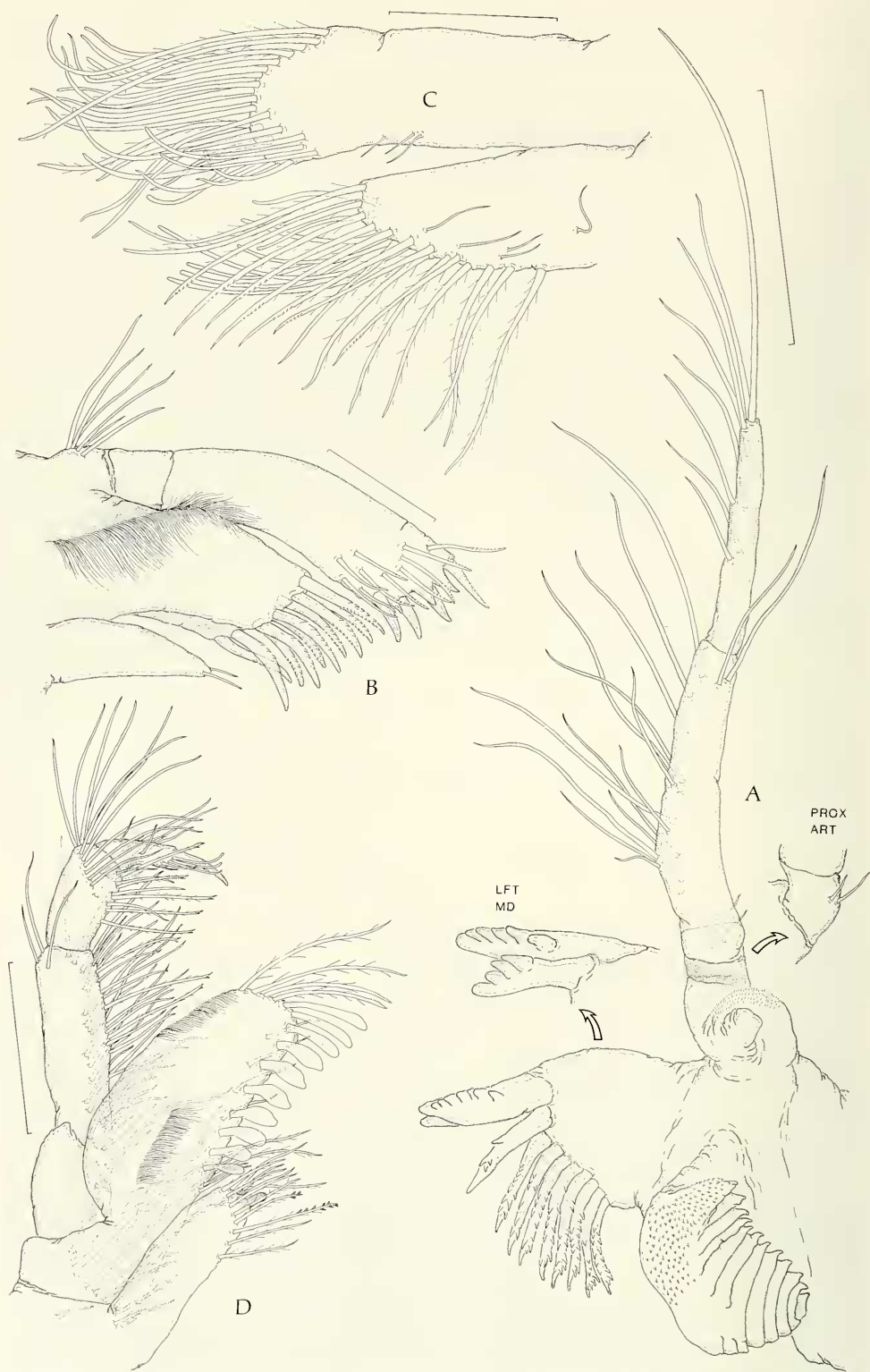


Fig. 2. *Ampelisca brachycladus* n. sp.: A, right mandible; B, first maxilla; C, second maxilla; D, maxilliped; symbols: LFT MD = left mandible; PROX ART = proximal article. Scales: 0.1 mm for B, C; 0.2 mm for A, D.

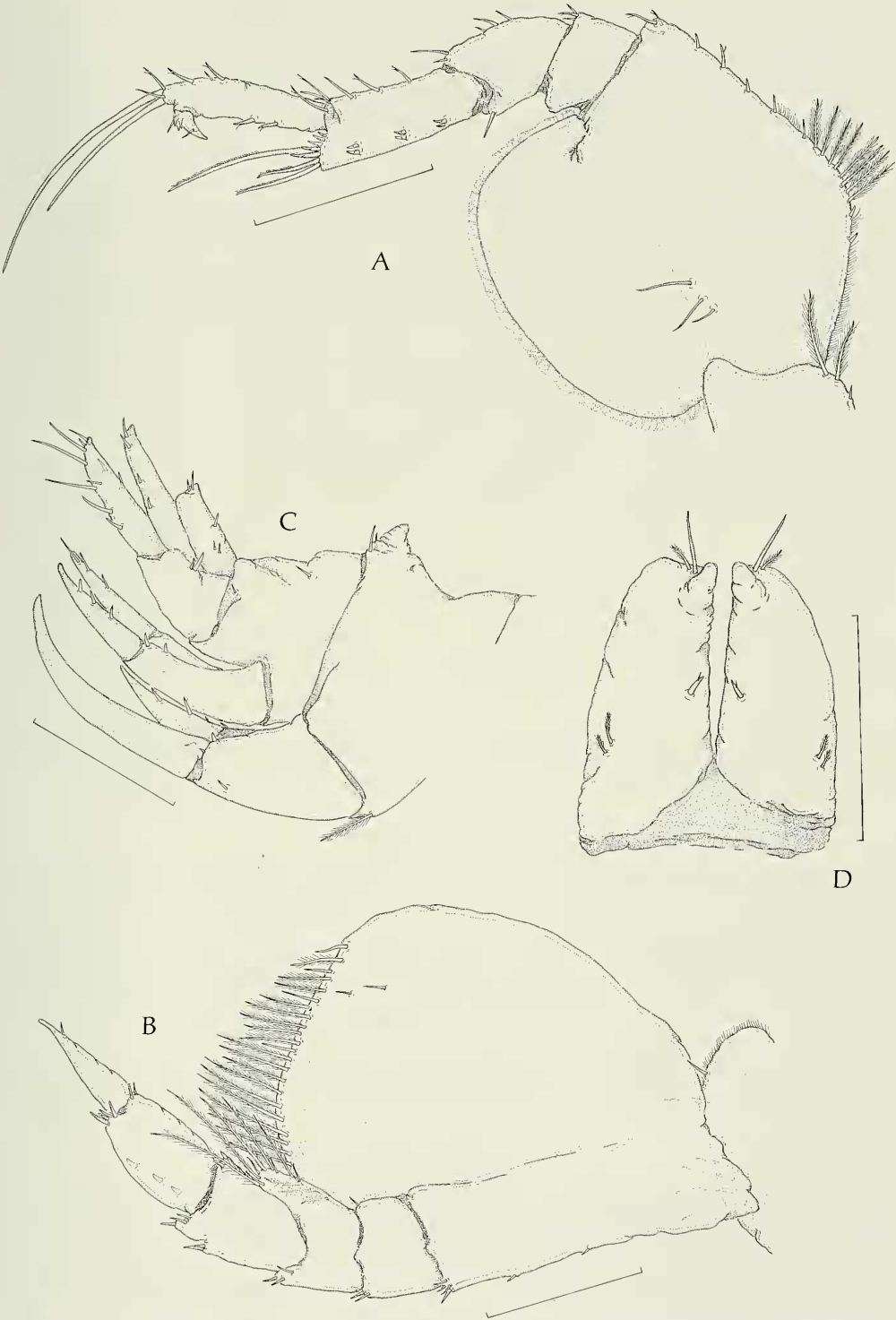


Fig. 3. *Ampelisca brachycladus* n. sp.: A, pereopod 6; B, pereopod 7; C, urosome; D, telson. Scales: 0.5 mm for A; 0.3 mm for B, C; 0.6 mm for D.

posterior lobe reaching more than halfway along hind margin of article 5; article 4 posterior lobe setose; article 5 distal anterior edge notched; article 6 longer than article 5; article 7 equal in length to article 5. All pleonal segments dorsally smooth. Epimera 2 and 3 posterodistal corners subquadrate. Urosomite 1 (Fig. 3C) dorsally a pointed hood. Urosomites 2 and 3 dorsally smooth. Uropod 1 reaching end of uropod 2; inner ramus one-half length of outer ramus; peduncle short and stout. Uropod 2 outer ramus lacking subapical spine. Uropod 3 rami lanceolate. Telson (Fig. 3D) deeply cleft, with terminal spine and seta on each lobe; each lobe with single spine halfway along median edge, and two spines inserted on outer margin $\frac{1}{4}$ th distance from proximal end.

Relationship.—*Ampelisca brachycladus* n. sp. is most closely related to *Ampelisca agassizi* (Judd 1896) (see Dickinson 1982) in having subquadrate epimera 2 and 3 and in having the urosome compressed lengthwise. However, they are distinguishable by article 5 of pereopod 7 of the new species being anterodistally notched; their telsons are also quite dissimilar. *Ampelisca brachycladus* is distinguished from all known congeners by the short inner ramus of uropod 1.

Material examined.—All specimens deposited in the Los Angeles County Museum of Natural History. LACMNH No. 85-199.1, Aliso Beach, California (33°28'06"N, 117°44'06"W), Jan 1985, 35 m, 1 holotype female (7.3 mm); LACMNH No. 88-116.1, Santa Monica Bay, California (33°58'47"N, 118°30'27"W), July 1985, 27 m, 8 paratypes; LACMNH No. 85-200.1, Santa Monica Bay, California (33°52'34"N, 118°26'02"W), July 1985, 26 m, 3 paratypes.

Distributional ecology.—Geographic range—Santa Monica Bay, California to San Diego, California. Bathymetric range—sublittoral 10 m to 50 m depth. Sediment preference—mixed bottom areas of silt and sand.

Etymology.—The specific epithet, *brachycladus*, is a combination of the Greek words *brachys* (=short) and *klados* (=branch), alluding to the short inner ramus on uropod 1. It is a masculine noun in apposition to the generic name.

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